

## REMARKS

Claims 1-15 are pending in the present application. The Examiner is maintaining the rejection of claims 1-15 under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,898,385 (Makino), in view of Tugnait, Adaptive Estimation and Identification for Discrete Systems with Markov Jump Parameters, IEEE, 1982.

Applicant respectfully traverses these rejections.

Applicants' claims 1 and 12 are directed to methods of validating a byte sequence that include, *inter alia*, "defining a plurality of states for the byte sequence; designating one or more noise states from among the plurality of states; generating a most probable state sequence for the byte sequence; utilizing said most probable state sequence to identify all noise in the byte sequence; and localizing said noise in said noise states." Applicant's claim 15 further includes a method for generating a most probable state sequence that includes, *inter alia*, calculating  $P(X_0 \dots X_n | S_0 \dots S_n)$ , representing the conditional probabilities of said byte sequence given a state sequence; wherein said calculating  $P(X_0 \dots X_n | S_0 \dots S_n)$  comprises assigning a state label  $S_i$  to each  $i^{\text{th}}$  byte  $X_i$  of the byte sequence so as to maximize the equation:

$$P(X_0 \dots X_N | S_0 \dots S_N) = P_0(S_0) \left[ \prod_{i=1}^N \bar{A}(S_i | S_{i-1}) \right] \left[ \prod_{i=0}^N \bar{B}(X_i | S_i) \right]$$

wherein  $P_0(S_0)$  is the initial distribution of states;  $\bar{A}(S_i | S_{i-1})$  is a "state-to-state" transition matrix; and  $\bar{B}(X_i | S_i)$  is a "byte-from-state" matrix of the probabilities of generating a byte value  $X_i$  given a state  $S_i$ .

Makino is directed to a signal processing means that eliminates wasted time in a character message transmitted to a radio paging receiver. Makino's signal processing means uses a segmentation scheme to segment received data according to a predetermined number of bits based on an identification signal preceding the data. Makino discloses 4-bit schemes, 8-bit schemes, and 16-bit schemes. None of these schemes can be construed to be a noise state. Rather, Makino's signal processing device successively compares each segmented

character code sequence with one or more predefined special codes indicative of the number of bits into which the received data should be segmented. If a segmented character code sequence does not match the one or more special codes, the device stores the segmented character code sequence as message data with a bit length corresponding to the previously specified bit length. The message data comprises character codes corresponding in bit length to the previously specified segmented bit length. However, when a segmented character code sequence does match one of the one or more special codes, the bit length in which the received data are to be segmented is changed to the bit length specified by the special code. Thus, there is no disclosure, teaching or suggestion of “designating one or more noise states from among the plurality of states”. Further, there is no disclosure, teaching or suggestion of “generating a most probable state sequence for the byte sequence”, nor of “utilizing said most probable state sequence to identify all noise in the byte sequence”, nor of “localizing said noise in said noise states”, as claimed in Applicant’s claims 1, 12, and 15.

The Examiner stated that Applicant conceded in the response filed on June 28, 2004, that Makino discloses “signal processing means of comparable data partitioning means”, and from that the Examiner concludes that “such signal processing means provides equivalent functionality”. Applicant respectfully disagrees.

For example, the Examiner states that Makino’s noise state is “simply the ‘noisy/errored’ data sequence that is replaced by a different character code when the received data sequence does not match the predefined codes based on compare means.” Applicant notes that Makino nowhere discloses replacing ‘noisy/errored’ data, nor does Makino imply that received data to be segmented based on a changed bit length is noisy or in error. Makino discloses examining a received byte sequence for sequences of one or more bytes indicative of a change in the segmentation scheme. Furthermore, the Examiner’s statement with regard to Makino that the “most probable data sequence is the resulting segment comprising the previously defined segmented bit length known to be error-free” also benefits from improper hindsight gained from Applicant’s disclosure, as there is no suggestion in Makino of data sequences needing error correction. The Examiner, in stating “the errored/noise byte in the

received data sequence had been located in said received data sequence prior to substitution of said errored/noise byte to thereby result in a corrected received data sequence” also implies that the byte sequences in Makino indicative of a segmentation bit-length change are “errored/noise” bytes in need of correction. Once again, this assertion by the Examiner benefits from improper hindsight provided by Applicant’s disclosure, as Makino does not disclose, teach or suggest the presence of errored/noise bytes in need of correction.

The Examiner cited Tugnait for disclosing state transition means with a transition probable matrix. Applicant notes that a state transition means with a transition probable matrix is not disclosed in claims 1 and 12, thus Applicant assumes that the Examiner is basing the rejection of claims 1 and 12 on Makino alone, and that Tugnait is cited against claim 15 dependent claims 4-11. However, Tugnait does not disclose the elements of Applicant’s claim 15 that are also absent from Makino. Furthermore, Applicant notes that no arguments were presented in the response dated June 28, 2005, regarding a motivation to combine Makino and Tugnait.

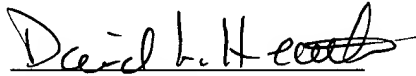
Thus, Applicant urges that Makino fails to teach or suggest all of the claim limitations of Applicant’s claims 1 and 12, and that the combination of Makino and Tugnait fails to teach or suggest all of the claim limitations of claim 15. Therefore, Applicant urges that a *prima facie* case of obviousness against claims 1, 12 and 15 cannot be sustained. Reconsideration and withdraw of these rejections are respectfully requested.

Claims 2-11 depend from claim 1, and are thus patentable for at least the same reasons as claim 1. With regard to claims 4-11, Tugnait does not disclose the elements of Applicant’s claim 1 that are also absent from Makino. Claims 13-14 depend from claim 12, and are thus patentable for at least the same reasons as claim 12. Reconsideration and withdraw of these rejections are respectfully requested.

**CONCLUSION**

Applicant urges that claims 1-15 are in condition for allowance for at least the reasons stated. Early and favorable action on this case is respectfully requested.

Respectfully submitted,

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